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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

- 1. A method of communicating state information between a server and a client having a memory, the method comprising the steps of:
 - i) providing an asymmetric encryption method having a public key provided to said client and said server and a private key provided to said server;
 - ii) said client communicating a client request to said server to perform a server action;
 - iii) said server responsive to receiving said client request, performing said server action and creating a state object containing post-action state information;
 - iv) encrypting said state object using said private key;
 - v) communicating said encrypted state object and a result of said server action to said client; and
 - vi) storing said encrypted state object in said client memory.
- 2. A method according to claim 1, further comprising the steps of:
 - vii) said client communicating a subsequent client request to said server to perform a server action and said server receiving from said client said encrypted state object with said subsequent client request; and
 - viii) said server, responsive to receiving the subsequent client request, decrypting said received encrypted state object using said public key.
- 3. The method according to claim 2, further comprising the step of:
 - ix) said server, after decrypting said received encrypted state object, verifying whether said received state object has been modified.
- 4. The method according to claim 1 wherein said server is stateless and said client is stateful.

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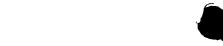
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- 5. The method according to claim 1 comprising the further step of said client decrypting said state object using said public key.
- 6. The method according to claim 3, said method comprising the further steps of:
 - x) said server, after verifying that said received state object has not been modified, using state information contained therein to perform the requested action;
 - xi) responsive to performing the requested action, replacing previous state information with new state information in said state object;
 - xii) encrypting said state object with said private key; and
 - xiii) sending said encrypted state object and a result of said server action to the client.
- 7. A data processing system for communicating state information between a server and a client having a memory, said data processing system comprising:
 - i) means for receiving a client request to perform a server action;
 - ii) means, responsive to said client request receiving means, for performing said server action and creating a state object containing post-action state information;
 - iii) means for encrypting said state object comprising an asymmetric encryption method having a public key provided to said client and said server and a private key provided to said server; and
 - iv) means for communicating said encrypted state object and a result of said server action to said client.
- 8. A data processing system according to claim 7, further comprising:
 - v) means for receiving from said client said encrypted state object with a subsequent client request to perform a server action;
 - vi) means, responsive to said means for receiving said subsequent client request, for decrypting said received encrypted state object using said public key; and
 - vii) means for verifying whether said received state object has been modified.

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- 9. A data processing system according to claim 8, further comprising:
 - viii) means, responsive to said verifying means, for using state information contained in said state object to perform said requested server action;
 - vi) means for replacing previous state information with new state information in said state object;
 - vii) means for encrypting said state object using said private key; and
 - viii) means for sending said encrypted state object and a result of said server action to said client.
- 10. The data processing system according to claim 9 further comprising means for receiving said encrypted state object; means for decrypting said state object using said public key; and means for storing said encrypted state object.
 - 11. A computer program product for communicating state information between a server and a client having a memory, said server provided with a public key and a private key of an asymmetric encryption method and said client provided with a public key of an asymmetric encryption method, said computer program product comprising:

a computer usable medium having computer readable program code means embodied in said medium for receiving a client request to perform a server action;

said computer usable medium having computer readable program code means embodied in said medium, responsive to said client request receiving means, for performing said server action and creating a state object containing post-action state information;

said computer usable medium having computer readable program code means embodied in said medium for encrypting the created state object with the private key of said asymmetric encryption method; and

said computer usable medium having computer readable program code
means embodied in said medium, responsive to said encrypting means, for sending said
encrypted state object and a result of said server action to said client.



12. A computer program product according to claim 11, further comprising:

computer readable program code means embodied in said medium for receiving from said client said encrypted state object with a subsequent client request to perform a server action;

computer readable program code means embodied in said medium, responsive to said means for receiving the subsequent client request, for decrypting said received encrypted state object using said public key; and

computer readable program code means embodied in said medium, responsive to said decrypting means, for verifying that the received state object whether said received state object has been modified.

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13. A computer program product according to claim 12, further comprising:

computer readable program code means embodied in said medium for replacing previous state information with new state information in said state object;

computer readable program code means embodied in said medium for encrypting said state object using said private key; and

computer readable program code means embodied in said medium for sending said encrypted state object with said new state information and a result of said server action resulting from said subsequent client request to said client.

14. A computer program product for communicating state information between a server and a client having a memory, said server provided with a public key and a private key of an asymmetric encryption method and said client provided with a public key of an asymmetric encryption method, said computer program product comprising:

a computer usable medium having computer readable program code means embodied in said medium for sending a client request to perform a server action;

said computer usable medium having computer readable program code means embodied in said medium for receiving the results of said server action and a state object containing post-action state information wherein said state object is encrypted with said private key of said asymmetric encryption method, and means for storing said state object; and



said computer usable medium having computer readable program code means embodied in said medium for decrypting said state object with the public key of said asymmetric encryption method.